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DERWENT-WEEK: 198532

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TITLE: Joining of silicon carbide sintered
parts - where joint contg. silicon carbide powder and
carbon (source) material is heated with part contg.
silicon

PATENT-ASSIGNEE: NISSAN MOTOR CO LTD[NSMO]

PRIORITY-DATA: 1983JP-0228326 (December 5, 1983)

PATENT-FAMILY:

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LANGUAGE		MAIN-IPC	
JP 60122774 A		July 1, 1985	N/A
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APPLICATION-DATA:

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JP 60122774A	N/A		
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INT-CL (IPC): C04B037/00

ABSTRACTED-PUB-NO: JP 60122774A

BASIC-ABSTRACT:

Joint including SiC-powder and carbon-powder or carbon-source material is heated with the joining part contg. Si. Si should be contained in either joining part, which functions as Si source in SiC reaction.

USE/ADVANTAGE - The present method enables junction of SiC ceramic parts in order to obtain complicated structures.

In an example, 80g powdered SiC, 20g carbon and 15g phenol resin were mixed and slurrified to finally obtain 105-210 micron pellets. Pellets were press formed to obtain semi-prods. Joint surfaces were polished with size 400 diamond grindstones. Paste contg. 80g SiC, 10g C and 60g phenol resin was painted on the joint, and heated at 1550 deg.C in vacuum (0.01 mmHg) for 2 hrs. The strength of the joint were: 30.1 (at R.T.) and 29.4 (at 1000 deg.C) (kgf/mm²).

CHOSEN-DRAWING: Dwg.0/6

DERWENT-CLASS: A97 L02

CPI-CODES: A05-C01; A12-W12D; L02-H02A; L02-J02C;